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Rebuilding Community Boston's North End

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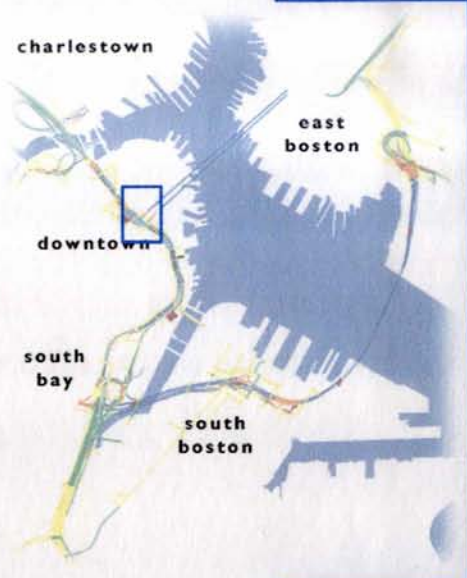
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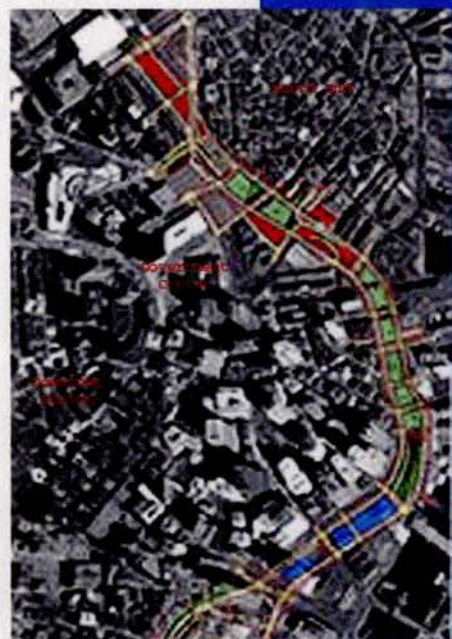
I. Thesis

The city is enhanced by architectural from which participates in the urban fabric as a means of connection, therefore promoting the formation of community. Community is defined as "a group of people living in the same locality and under the same government." (www.dictionary.com) This definition can be expanded upon to state that community can exist at multiple scales, including the scale of the city, the street, and the building.

The intent is to propose development for portions of the Central Artery Master Plan in Boston, Massachusetts. The city is currently in the process of relocating a major infrastructural element from its present location above grade to a tunnel beneath the city. Demolition of the existing central artery offers the city an opportunity to infill much of the land and restore surface level streets reconnecting the east side of the interstate to the downtown area. One such location for reconstruction exists at the North End. For the past fifty years the North End has been isolated from the greater area of Boston by the central artery. The reconstruction of the central artery below grade and the demolition of the existing artery offer the opportunity to reconnect the North End to downtown. However, this is not currently recognized by the master plan created by the Boston Redevelopment Authority. This thesis is intended to critique the current master plan for surface restoration and to develop a new proposal addressing this concern. The surface restoration proposals provide a starting point for design. The design will exist at two scales. First, the creation of a new master plan proposing intervention for various sites in an effort to mask the scar left by the demolition of Interstate 93. At another scale the design will focus on the development of particular elements of the urban plan and investigate these forms as buildings. The focus of building design will occur on



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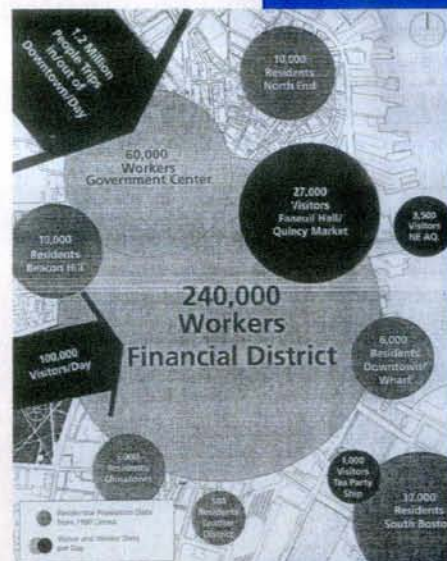


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parcel number nine of the Central Artery Master Plan. This intervention will take form as a complex consisting of urban housing, markets, retail space, and, both public and private green space. Strategies for design will include maintaining a relationship to the contextual architecture of the North End through scale, density, proportion, typology, and program. The plan will also include the design of two parcels of green space for use by residents and visitors. The park itself will exist as an urban room, initiating the development of boundaries and facades in each direction.

The design will address the formation of community at multiple scales including the scale of the city, the district, the street, and the building. In relation to the city as whole, public transportation to and from the site will act as means of integrating this community into the greater community of Boston. At the scale of the district the intervention will address the relationship of Blackstone Block to the North End. At the scale of the street, the design will reinforce a sense of community through the organization of multiple buildings on the site and their relationship to centralized shared spaces created within the complex. Both public and private spaces will be formed and will serve as communal gathering spaces. Specifically, the relationship of the site to Blackstone Street will be demonstrated through the accommodation of market space at street level within the site. The development of pedestrian walkways and public green spaces will be essential to creating a pedestrian friendly city. These spaces will consist of courtyards, markets, shops, and parks and will be linked using pedestrian circulation as a stitching mechanism. At the scale of the building the individual units will exist through the use of vertical circulation. It is intended that the housing be considered private space and interaction occur on the street. Through the development of design at multiple scales the project will mediate between city, district, street, and building.

Mediation between the North End and downtown Boston encourages interaction amongst a cross section of society. The location of the site presents the need to address tourists, government employees, residents of the North End and financial district employees. Each group currently exists as separate communities within the context of the city, but overlap near the site creating the need for a space with the ability and intent to bring together members of each community allowing for social interaction and cultural infusion. The opportunity to create a space, bringing together these communities, is presented by the proposed park. The park will exist on parcels eight and ten. The development of building proposals at the north, south, and east sides of the park, in addition to parcel nine, will provide limits to the park creating an urban room.



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Supporting Argument

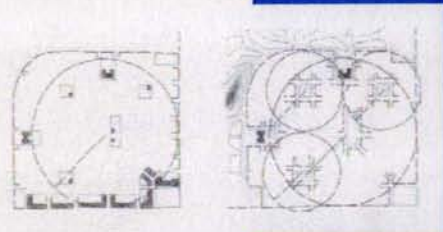
II. Supporting Argument

A. Conceptual and Theoretical Foundation

The conceptual foundation for the thesis lies in the principles of New Urbanism. The driving force of New Urbanism is the desire to create a sense of community within a planned community. New Urbanism is applied at three levels, the first being the region: the metropolis, the city and the town. The second is the neighborhood, the district and the corridor followed by the block, the street and the building. New Urbanists found themselves on principles of seamless integration of housing, retail and various types of spaces.

At the regional level, new urbanism is driven by ideas regarding pedestrian circulation, boundary, diversity, and density. "There should be defined edges, the circulation system should function for the pedestrian, public spaces should be formative rather than residual, civic and private domains should form a complimentary hierarchy, and population should be diverse." (Katz XI) Diversity will be addressed through the mediation and integration of various populations within the city. Public spaces, including the market and park will be designed initially and reinforced through the development of neighboring structures providing boundary. Hierarchy is addressed through scale and density. The proposed structures will vary in terms of the program to be accommodated within. The diversity of population is an existing condition, but will be further enhanced by the development of various types of housing and various services specific to different communities. The five-minute principle is applied demonstrating a bias toward the pedestrian and the ability to increase the amount of interaction between residents.

The neighborhood and the district will "offer a



"The New Urbanism: Toward and Architecture of Community"

balanced mix of dwellings, workplaces, shops, civic buildings and parks.” (Katz XVII) The design will provide housing types to accommodate residents of varying economic levels and sociological types. For example, studio apartments may be more attractive to young college graduates where as a three-bedroom apartment unit would better accommodate an established family. Each district should also have a defined public space as the center. In relation to the proposed site the park has the potential to fulfill this requirement surrounded by housing, retail, market, and civic spaces. The park also acts as the center of the district through its abilities to mediate between communities.

At the scale of the street, new urbanists encourage the formation of streets as network used to diversify use and encourage movement within city. (Katz XXII) Methods used by new urbanist that continue to promote pedestrian use despite the presence of vehicular traffic include decreasing the turning radii at intersections to slow turning traffic. New urbanism states that the block should be formed to address public space on all sides. Alleys should accommodate parking and streets should first address the pedestrian. The building can exist as one of two types. The first is monumental and standing out amongst the context and the second is fabric, which participates in the context.

Reston Town Center in Fairfax County, Virginia provides an example of a new urbanist development that achieves the sociological goals desired. Although a suburban development, Reston Town Center exists as mid-rise buildings providing retail space at street level and office space above. The area is surrounded by housing of varying typologies. The central public space is limited to pedestrian access and is mixed use space. During the winter months it accommodates an ice rink and in the summer months an outdoor concert series



Planned parcel divisions overlaid with existing parcel conditions

bringing together many residents, both young professionals and families encouraged interaction and promoting community. (Benfield, Terris, Vorsanger 123-126)

B. Benefits of Selected Program

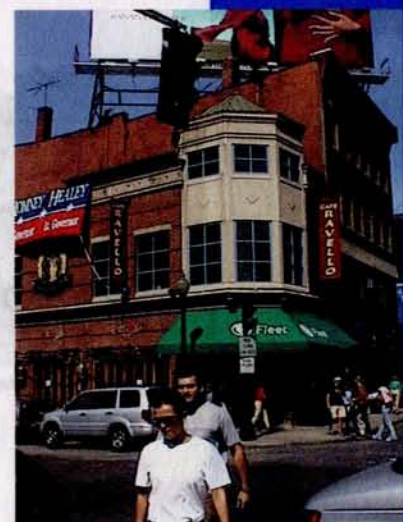
The urban park will act as the center of the district being used by a cross section of the population. The park is to be subdivided by an extension of Hanover Street. The street consists of two lanes of traffic in each direction. The possibility of elevating the park to create a continuous park exists however, by isolating the pedestrian from vehicular traffic limits the ability of the pedestrian to experience the city. Vehicular traffic contributes to the pace and vitality of the city. It is the intent of this thesis to maintain the vitality of the city through density, pace and interaction.

The market space is perhaps, the most lively and active space of the program. Currently the market occurs along Blackstone Street. It is intended that a portion of parcel nine at street level be designed to accommodate the market. The market will occur along both sides of the street maintaining a path for market visitors through the street. Housing to be located on parcel nine will be accessible from a path located behind market vendors. The market will accommodate tourists, employees and residents of the North End.

At street level on each site selected will exist as retail space. As is typical to the North End and most of Boston retail space exists at street level adding permeability to the façade and allowing for interaction between passers by and shop owners and employees. The retail space provides the benefit of mediating between the housing above and the ground plain adding a sense of vitality to the ground plane.

The idea of housing was generated as a means of addressing community within the scale of the block. Residents of the units will be encouraged to intermix with other community members forming community.

Haymarket on
Blackstone
Street



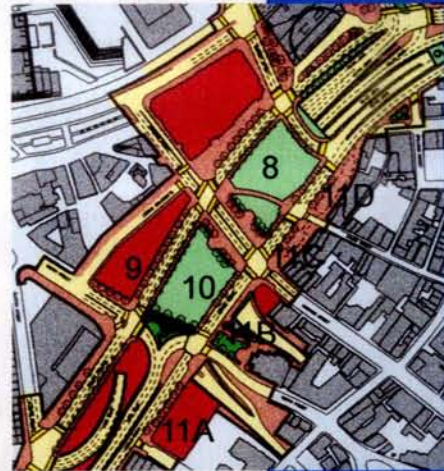
View of North
End from
beneath
existing artery

C. Opportunities Presented by Site

The proposed sites for intervention are part of the surface restoration plan for the city of Boston following the completion of the central artery tunnel project. They are located on the plan as parcels 9, 10, 11, and 12. The site, located between downtown Boston and the North End, separates two distinct neighborhoods. They have developed separately for the last fifty years due to the division caused by the construction of Interstate 93 in the 1950's.

To the east of the central artery is the North End, also referred to as Little Italy. It has a unique history and a distinguishable flavor as Boston's oldest neighborhood. Strong ethnic ties within the North End, and its Italian heritage, have provided a sense of community that has been retained despite the urbanization and development of Boston that has occurred during the last fifty years. Consumption of the North End by developers was prevented by the physical boundary created by the Central Artery. In this sense the artery acted in a positive manner protecting the North from developers and high-rise buildings. This allowed the North End to maintain and preserve its traditional four to five story brick structures and dense urban fabric.

The site presents itself to re-establishing a link between the North End and Blackstone Block reuniting two elements of the historic North End. They had existed as one neighborhood until the construction of Interstate 93 demolished much of the North End and displaced some 20,000 residents. The current proposal by the Boston Redevelopment Authority calls for the majority of the artery to be converted into public green space, however the scar from the artery would still exist, only in another form. An alternative to this proposal in relation to the portion of the artery located adjacent to the North End is to recreate the urban fabric that had existed prior to the artery. The benefits of such a design proposition include the unification of the Blackstone



Master Plan for the Central Artery Courtesy of the Boston Redevelopment Authority



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Block with the rest of the North End, as well as, the ability to erode the scar left behind.

Usage of the site will occur by residents, visitors and commuters working in the vicinity. The diversity of the population using the site drives the building programmatically. The building will accommodate each group and intermix the groups in an effort to facilitate the formation of community and promote cultural infusion. Approximately 1.2 million trips are made, either in or out, of the city each day by residents, visitors, and commuters. The government center alone employs 60,000 people and the financial district another 240,000 individuals. Tourism also influences the downtown area with approximately 27,000 visitors each day to Quincy Market and Faneuil Hall. In addition, the North End houses approximately 10, 000 residents, all of whom would have access to the public spaces created at street level of the site.

The proposed park for parcels 10 and 11 offers the opportunity to provide a new face for the park. Upon analysis of the current proposal for the park one recognizes the challenge of the park to the pedestrian. The park is bisected by a four-lane extension of Hanover Street denying the pedestrian the ability to walk continuously from the northern end of the park to the southern tip of the park. The need for pedestrian walkways due to the traffic of the new surface arteries and tunnel ramps is presented. The pedestrian walkways would address traditional paths of circulation such as the Freedom Trail, which crosses the park adjacent to Salem Street. Pedestrian walkways could take various forms. Possibilities include a physical pedestrian bridge or an elevation and extension of the landscape.

Vehicular traffic on the site presents many issues. One of the first issues to consider is the initial view the visitor will receive upon arrival at grade from the relocated central artery. From the central artery



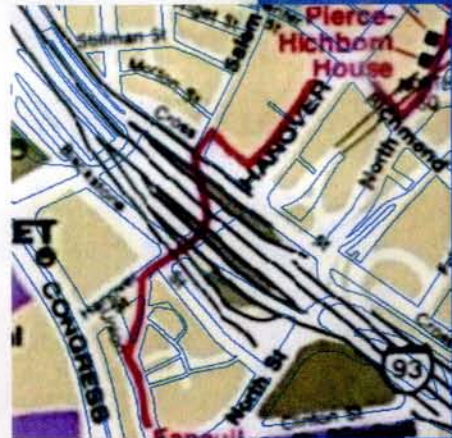
southbound arrival above ground after entering the city presents the operator with an immediate view of the park and the surrounding structures. This presents the need for an architecture that acts as a meaningful entry and representation of the city of Boston. Public transportation system and its proximity to the site allow for integration of the community into the larger community of the city of Boston. Residents, visitors and commuters will pass by or occupy the site daily as they travel to and from their destination due to the relationship of the site to many transit routes.

Other historic monuments and structures to adjacent to the site include Quincy Market and Faneuil Hall. Aside from these few historic structures to the west of the site construction is generally of a more modern design and materiality. Steel framed high-rise structures with glass enclosure systems are appearing in the relatively low skyline. The new government center is a modern design of architect, I.M. Pei and operates at a much larger scale than the city traditionally did.

D. Strategies for Design

The housing complex will be designed to occupy parcel nine on the master plan for the central artery tunnel project. The construction of housing and market space on this site will mediate between the historic North End and the downtown Boston. The design will mediate between the differing districts of the city through the use of common typologies, program, densities, public spaces and walkways extending into the city in all directions integrating the site into the existing fabric of the city and accommodating the pedestrian.

The intervention will consist of residential and commercial spaces, as well as, market spaces and garden spaces for public use. The buildings will consist of street level retail space and market space for public use in addition to public green spaces to be used by



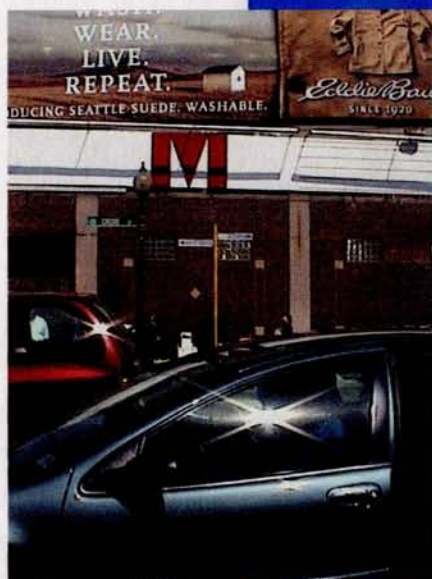
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residents of the housing. The building should accommodate approximately 24 units, being mainly one, two and three bedroom units with a living/dining space, kitchen space, and amenities. The area of the unit will be twenty-five feet by fifty feet with a typical ceiling height of ten feet. The building will also be oriented primarily toward the proposed park, but shall address Blackstone Block by providing a covered area at street level allowing market vendors to occupy. It is also important that the design provides pedestrian walkways to the North End and protect the pedestrian from high volumes of traffic at tunnel entrances and exits.

The housing project will relate to the low-level brick construction of the North End and Blackstone block recreating a link between the North End and downtown Boston. The complex will exist adjacent to two city blocks of green spaces to be created by the Boston Redevelopment Authority following the completion of the Central Artery Tunnel Project and will therefore provide a new face for the park. The current structures of the North End consist of solid brick walls with few penetrations as they had historically faced other buildings and since faced the large above ground steel and concrete of Interstate 93. The site's relationship to public transportation systems is an additional consideration. Other considerations for integration into the city include the relationship of the site to the waterfront, the government center and the other landmarks within the immediate area. These relationships will be acknowledged through the design of pedestrian walkways and established framed views.

The design will maintain a relationship between the intervention, the spaces it creates and the pedestrian through the design of pedestrian walkways and small intimate courtyard spaces. The urban housing project will be integrated into the city through the use of pedestrian paths of circulation and series of

View of North End
from beneath
current artery

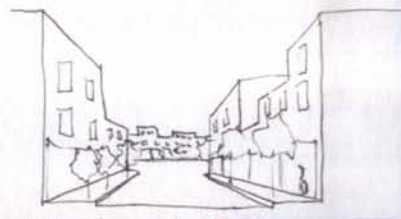


Brick party wall
facing proposed
park

centralized public and private spaces. Foliage will be placed in the park and along the street fronts to define the pedestrian walks and the boundaries of the streets. The trees will also be used to provide a sense of human scale to the street.

Cultural infusion is another goal of the intervention, as it should, encourage interaction between residents of the North End and residents of other neighborhoods of the city. Encouraging interaction allows for cultural diffusion and a mass influx of shared knowledge and tolerance for different cultures. The creation of diversity in the area conforms to the ideals of New Urbanism, in addition to adding to the culture of the site and area.

The initial intent is to dissolve the line of separation between the North End and the government center through the design and organization of the housing complex. It is the intent to reestablish a connection in both a physical and mental manor. The connection in physical terms will exist as a series of pedestrian walkways and paths through the proposed site, Blackstone block and the North End allowing for interaction to occur amongst the residents, workers, and visitors to both the North End and the Government Center. In another sense the connection will be restored through a reinterpretation of the traditional building types of the North End preventing the separation of Blackstone Block and interlocking both districts. The building will take on a form expressive of the lifestyle of the area residents accommodating a market at street level as well as additional retail storefronts. The building should invoke a sense of being in the North End of Boston to both its residents and visitors. The physical connection between the North End and the Government center was destroyed in the 1950's when construction of the Central Artery caused the destruction of portions of the North End and bisected the city. The demolition and removal of portions of the



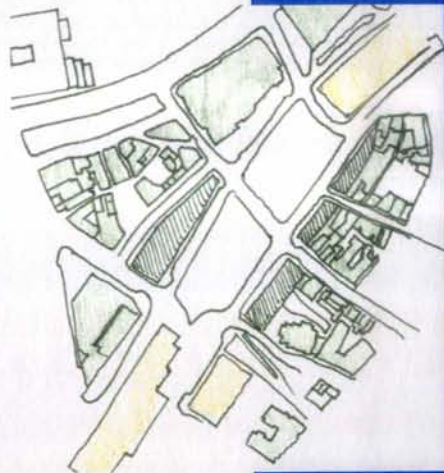
Street Section with added foliage to provide definition to pedestrian space



urban fabric destroyed the labyrinth of city streets and the dense urban fabric only to be later replaced with large high rise structures seemingly out of place in the historic city center. In the year 2005 the Interstate will be fully relocated as an eight to ten lane highway below grade at its current location freeing 27 acres of land for development of both buildings and parks. The city of Boston and the Redevelopment Authority have agreed to develop only twenty-five percent of the land to be made available by the big dig and to provide public green space on the other seventy-five percent. The creation of a series of parks along the former artery location is designed to relate to the existing Emerald Necklace.

It is the intent to extend this community to the government center creating a new link to the city and mediating between building typologies and unifying the residents of the North End and the remaining city. The building will face the park providing a boundary to the public space created on parcels nine and ten to the West completing the perimeter along with the proposed structures for parcels located at the north and south bounds of the park. The first floor of the building will exist as storefronts permeated to permit pedestrian access to smaller interior courtyard similar to those found in the North End and filtering the pedestrian through to market space provided along Blackstone Street.

Today, as the Boston Public Works Commission is removing the interstate and beginning to construct the a new highway below ground, residents of the North End are once again concerned about their neighborhood. The main fear of residents is that of development of the North End resulting in the destruction of the historical neighborhood. The fear is validated because the North End has always been disconnected from the rest of the city by the interstate making development of the North End impractical. With the removal of the interstate the connection between the North End and the rest of city is reestablished.



Relationship of existing structures, structures to be built by BRA, and proposed intervention



Analysis of Program

III. Analysis of Program

A. Spatial Requirements

The varying size, shape, and context of each parcel creates different needs and challenges for design. The limited size of the parcels will influence the type of housing and the organization of the program within the proposed structures. The design and analysis will include parcels, nine, eight, ten, and eleven a, b, c, and d.

Parcel nine is the focus of design. This parcel presents many challenges, as well as, many opportunities. The oddity of the shape of the block, as well as its general size will limit the depth and organization of housing units. The design of the individual unit will dictate the spatial requirements of program. The unit will be approximately twenty-five feet in width and fifty feet depth. Each unit will include a living/dining space, kitchen facilities, storage, a bathroom and one to three bedrooms. The units will be accessed through a core of vertical circulation.

Blackstone Street to the west and the newly proposed park to the east of parcel nine will require the parcel to be treated differently at each facade. The northern portion of the parcel is extremely narrow indicating the need for buildings on either the east or west side to dominate. Based on the intent to create an urban room at the location of parcels eight and ten it is most appropriate to allow the east facade to continue to Hanover Street providing the necessary edge. Zoning for parcel nine dictates the maximum building height is to be fifty-five feet which allowing for three stories of public housing above a ground floor of retail space. Parcel nine will also encompass overflow and expansion of the market that currently consumes Blackstone Street through a street level public space accommodating and providing for the market. The

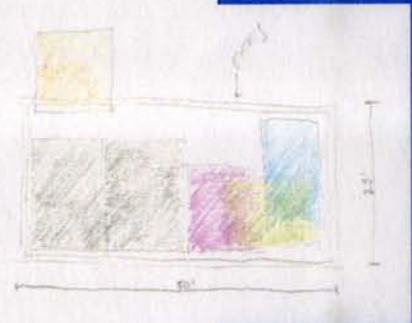


Diagram of Unit Organization



Parcel Nine

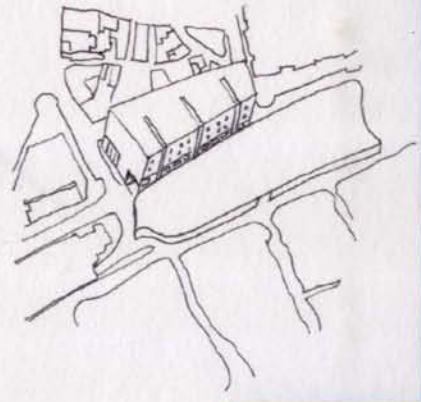
space provided to accommodate the market may or may not be covered, but will operate as a court when the market is not in operation. Facing the market on the west side will be retail space a street level which will be permanent and in operation during the market and its off times.

Parcels eight and ten, both designated as green space will be redesigned to provide one uniform park defined on all sides. The park may still be physically divided by Hanover Street, but will maintain the overall appearance of a single space due to the boundaries to be imposed by the new construction. Two options exist for accommodating the pedestrian at the park. The pedestrian may be isolated from the street and vehicular traffic through a change in elevation of the park. The idea behind this stems from need to unify the space allowing the pedestrian to travel from the north end of the park to the south end without crossing a major surface street. The tunnels beneath the park prevent decreasing the elevation to be below that of the surface level streets, therefore limiting the opportunity to elevating the park above Hanover Street. Elevating the park would allow for parking beneath and the development of retail shops on the perimeter. Hanover Street would pass beneath the park within a tunnel. Then one can consider the feasibility of extending the park across the surface artery south to the east facade of the proposed intervention for parcel number nine or the possibility of cantilevering the proposed structure for parcel nine to the west edge of the park. The south bound surface level artery would be accommodated within a tunnel similar to Hanover Street. The benefit of extending the park allows for pedestrian interaction with the building from the park level. The building would then accommodate an element of vertical circulation allowing interaction between the market below and the park above.

Parcels 11a, b, c, and d offer the opportunity to



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create a continuous new edge to the park. Current structures provide only a solid masonry party wall as a park side facade. The new structure will consist of retail space at street level with housing above. It will maintain a relationship to the architecture of the North End through its density, scale, height, and articulation. The housing should exist as two to three story structures with a relationship to the brick structures of the North End.

B. Relationship of Programmatic Elements

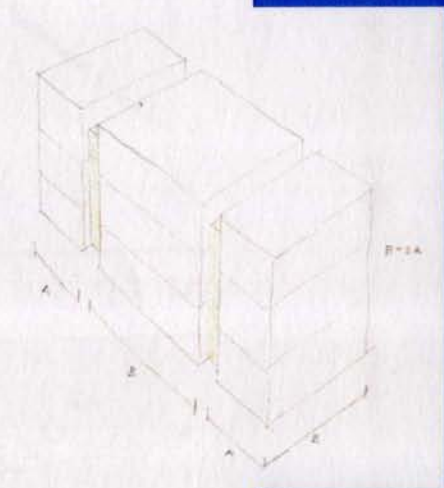
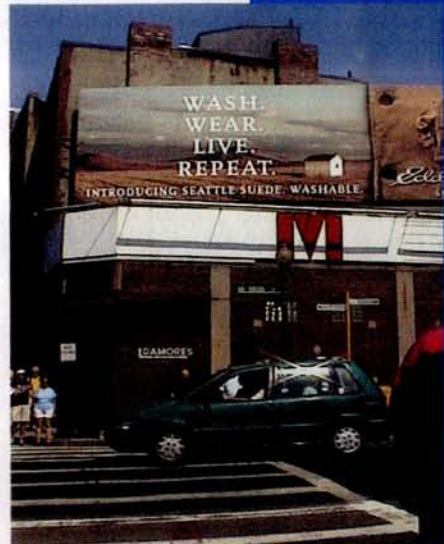
The arrangement of the programmatic elements will be driven by the ideas of community and interaction. It is necessary that the programmatic elements overlap and intersect to bring together various types of people. The ability to encourage interaction amongst visitors to the site will create a sense of comfort and belonging in each of the proposed programmatic situations.

An initial reaction to the site suggests that the market space exist at street level along Blackstone Street as currently the street hosts markets for fruits and vegetables. The market space will be related to the park through penetrations in the facade of the intervention on parcel nine. If elevating the park it would be necessary to provide vertical circulation from the market to the park.

The housing requirement of the program will relate to the street. It is intended that each core of vertical circulation access six units, two on each floor. The circulation core will be accessed directly from the street encouraging the occupant to interact with neighbors and visitors on the street. This creates an extension of community from within the building to the local community and prohibits the formation of an exclusive community within the housing complex.

C. Requirements for Spatial Quality

The quality of interior spaces will be enhanced through maximization of the surface area of facades allowing for the most natural light and fresh air possible.



Exterior green spaces will in turn act as a gathering space promoting interaction and for social activities. The form of the building shall permit sunlight on Hanover Street in the daytime hours causing the housing complex to be set back if necessary at the north side of the site. In terms of structure, the building will need to be isolated from the vibration of automobiles passing beneath in the central artery tunnels. One possible solution includes the use of seismic design instruments. The tunnels will also dictate the placement of structural columns and beams which will be placed upon the tunnel foundation walls.

D. Sociological Role of Spaces

Spaces of both public and private usage will be integrated into the design. The primary public spaces will include the park designated at parcels eight and ten and the market space to be accommodated within parcel nine adjacent to Blackstone Street. Several communities exist within the immediate vicinity of the site. To the east is the Italian community, to the west are professionals employed in the financial district or government center. Tourists occupy both the east side and the west side. The market at Blackstone Street is another community in itself. The building should as a whole bring these communities together encouraging cultural infusion, as well as, a sense of belonging.





Analysis of Site

IV. Analysis of Site

A. Existing Documentation and Information

Boston, a city of change and growth, is currently facing many issues of urban planning and design associated with the Big Dig. The city has grown from a small community at the time it was settled to a large city composed of many communities. Neighborhoods within the metropolitan area each exist as community, but within each district community exists at an even smaller scale, within the street, the city block and the building.

The atmosphere of the North End is one that cannot be recreated with its ten thousand residents and thousands of tourists. Visitors to the North End desire to share in the activity of such a community. The strong Italian presence in the North End is visible in all directions whether it is the sounds of women speaking to one another in their native language, the smell of Italian cooking or the sight of a trattoria on Hanover Street. The casual interaction of residents is seen along the streets as well as in courtyards secluded from the busy street by restaurants and shops. The area itself exists as a community within the greater metropolitan area made possible by having a population able to share such a strong bond as their cultural heritage.

The fabric of the North End is woven together with a labyrinth of narrow winding streets binding together low-rise blocks of brick structures. The blocks are bounded to the street side with buildings and the interior of most blocks exists as courtyard, semi private space for use by the residents of the neighboring buildings. Each courtyard establishes a smaller, unique community using itself as a communal space. In these intimate courtyards, the visitor is able to see laundry hanging from the windows of many traditional Italian families and large flower gardens aside park benches. From the street narrow alleys permeate the continuous



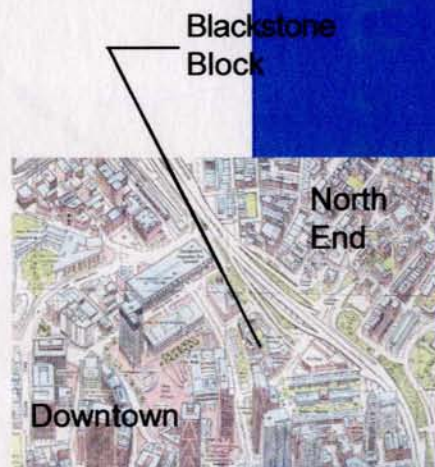
Aerial Photo of
Boston's North End

edge leading to the courtyards filtering the visitors to the oases. Most visitors to the North End are unaware of such spaces from the street and simply travel the winding narrow streets permeating the facades as they wander into one of many delis or restaurants occupying the street level of most buildings.

Architecture of the North End tends to be consistent in both form and function. Each building contains retail space at street level and housing above providing residents of the North End the convenience of locality to shops and markets meeting their daily needs for food, employment and entertainment. Due to its mixed programmatic use the North End uses the pedestrian as a vehicle for travel although automobiles are permitted. The proximity of residents to shops and employment also limit the need for an automobile.

To the immediate west side of the site adjacent to the government center exists the historic Blackstone Block, which is still considered to be a portion of the North End. Blackstone block exhibits seventeenth and eighteenth century street patterns including Marshall Street, Salt Lane, Marsh Alley, Scott Alley and Creek Square. It consists of four to five story brick buildings containing retail spaces at street level and housing and offices above. The block is primarily known for its meat markets that are still in existence.

Downtown Boston provides the contrast to the North End demonstrated through its high rise, steel construction and concentrated development. The area exhibits a much less dense urban fabric with wider streets to accommodate a larger volume of traffic. The scale while overwhelming the pedestrian in many areas with the scale of public spaces and high rise towers. In further investigation, one finds a faster pace amongst the residents and employees of downtown, as well as with the vehicular traffic which dominates many of the streets to the west of Interstate 93. Spaces are becoming less intimate and more grandiose allowing



Olde South Publishing
Boston, Mass.

the pedestrian to avoid interaction and becoming community in a more passive sense of the word.

The idea for the Central Artery through downtown Boston was generated in the 1940's when transportation planners from the city and the State of Massachusetts began to anticipate the potential of the automobile to consume the landscape. The intention of the Department of Public Works was to create "a futuristic highway in the sky" (www.bigdig.com) although midway through construction they faced the reality that what they envisioned was not what they were constructing. The Green Monster, as it is often referred to stands upwards of 80 feet in the air at some points along its many miles of concrete, steel and automobile congestion. The central artery was designed to carry 75,000 vehicles per day at the time of construction. However, today the interstate carries approximately 190,000 vehicles a day resulting in the need for expansion.

With the possibility of widening the interstate unrealistic, Boston city planners and planners from the State of Massachusetts were forced to be creative and innovative in designing a new plan to accommodate the increased traffic flow. The obvious idea was to bury the highway below grade, freeing 27 acres of usable land for development of green space and building. In 1991 Boston began the inevitable Big Dig.

It is intended that by the year 2005 the Central Artery will be completely relocated as an eight to ten lane highway below grade at its present location. Evidence of its existence will still exist in the form of on and off ramps for vehicular traffic at various locations along the 17 miles of tunnels. The present Interstate 90 has also been extended to Logan International Airport via the Ted Williams Tunnel beneath the harbor.

The Central Artery Tunnel Project involves the removal of an interstate that for fifty years has acted as a barrier between downtown and the historic North End.



The view north along Blackstone Street



Looking east to the North End from Blackstone Street



Looking southeast from Blackstone Street

The removal of the interstate leaves the possibility for development of the area dividing the city. Much of the area will remain as green oasis space while a smaller portion will be developed. Through the development of this area it is intended that the connection between the North End and downtown Boston be restored. Blackstone Block which is also considered to be a portion of the North End has been isolated from the North End by the interstate as well, indicative of the need to strengthen the relationship between these areas. Through the development of a housing complex relative to the scale of Blackstone Block and the North End as well as a series of pedestrian walkways, market space and retail space the possibility of restoring this connection exists.

B. Surface Restoration Documentation and Information

The Boston Redevelopment Authority has created a plan for surface restoration following the completion of the Big Dig. The plan designates the zoning of each lot as well as layouts for new surface streets to reconnect the city. The plan also designates that only twenty five percent of the land made available through the big dig and remaining parcels will be developed as green space for public use. One such park is located adjacent to the North End. The massive three acre park be will be constructed between the surface artery south and the surface artery north. Much of the existing fabric has always faced the highway, therefore consisting of monotonous brick facades with little fenestration. As a part of this proposition it is also intended to provide a new face appropriate for such a grand public space and welcoming to visitors to the city. The master plan for the Central Artery Tunnel Project designates usage of each of the parcels to be made available following the completion of the tunnel project. There are designs for buildings on some sites, while other sites will be contracted with private developers. It has been determined that seventy-five percent of the



Central Artery
Master Plan
courtesy of BRA

land to be made available will be designated as urban space and only twenty five percent will be developed. The surface restoration portion of the project will create surface level arteries from Causeway to Kneeland on either side of the parks and buildings proposed to support local vehicular traffic

Project goals for the North End include retaining current residents, reviving the life, landscape and sunshine to Hanover Street, signifying the importance of Hanover Street and Salem Street, a civic component, and the development of a community center in the existing Tunnel Administration Building. It is intended that Hanover Street will be extended to the government center. The blocks on either side of Hanover Street at the current location of Interstate 93 are to act as park for residents of the North End. Areas to the North and South of the park are to be built up by developers selected by the planning commission and city government. Reconnect North End through continuous fabric and density. "Consistent, dense and defined urban fabric and, at its heart two streets, Hanover and Salem, that connected it to the greater City." "together reinforcing the singular character of the North End by creating a great place by and for the neighborhood" (Boston Central Artery Corridor Master Plan 36)



Graphic Analysis of Site



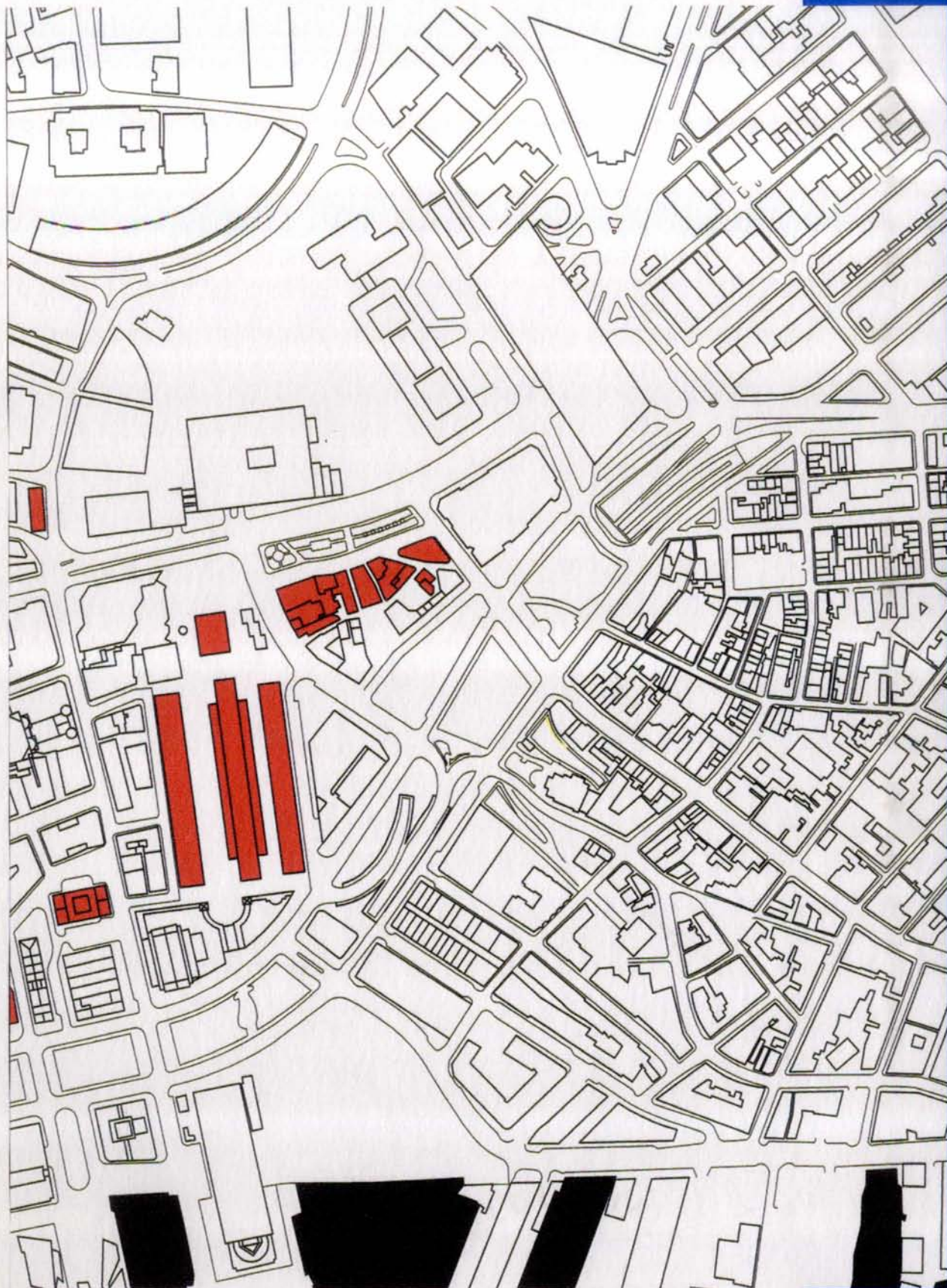
Surface Restoration Plan



Figure Ground



Green Space

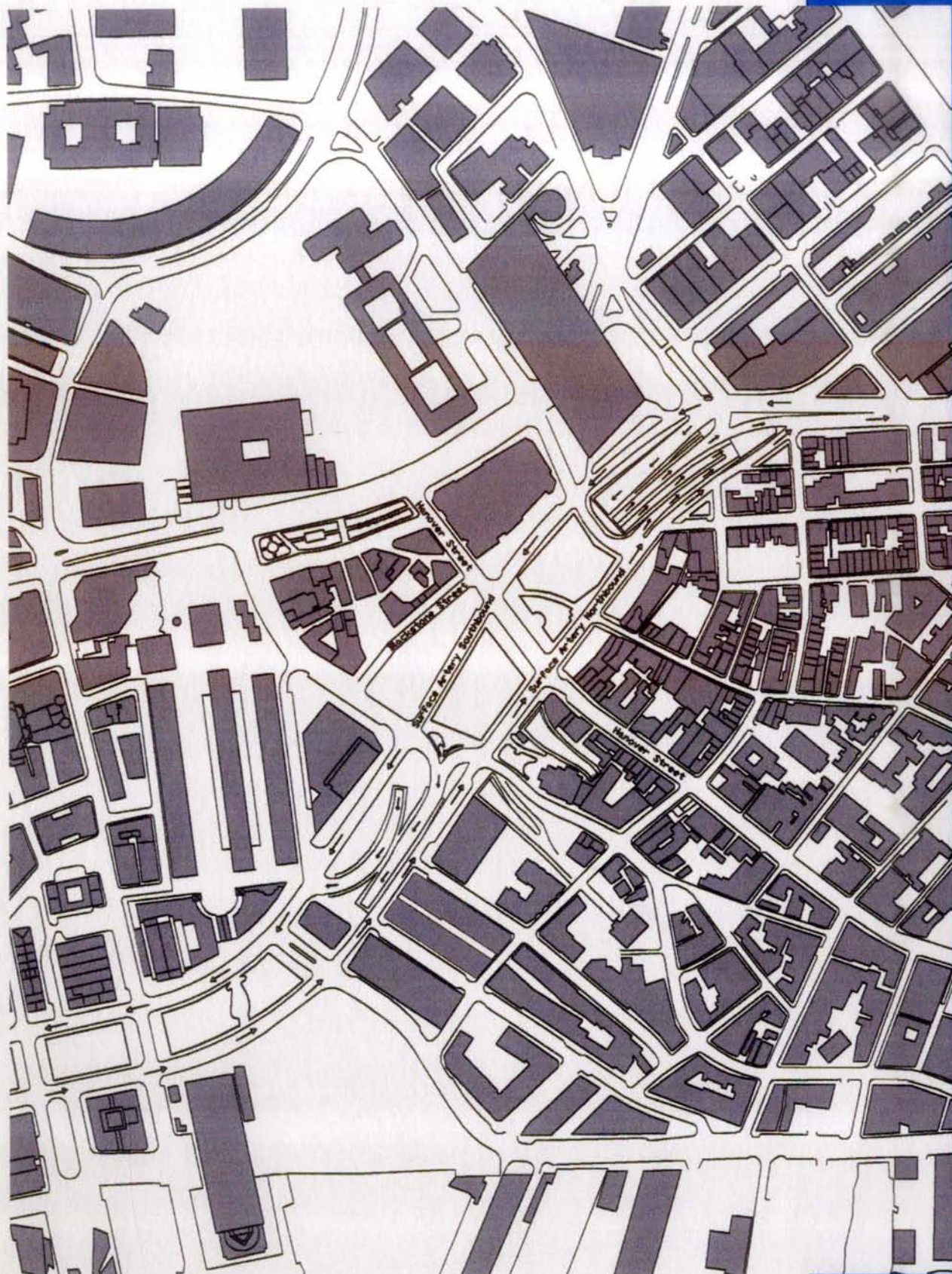


Historic Buildings





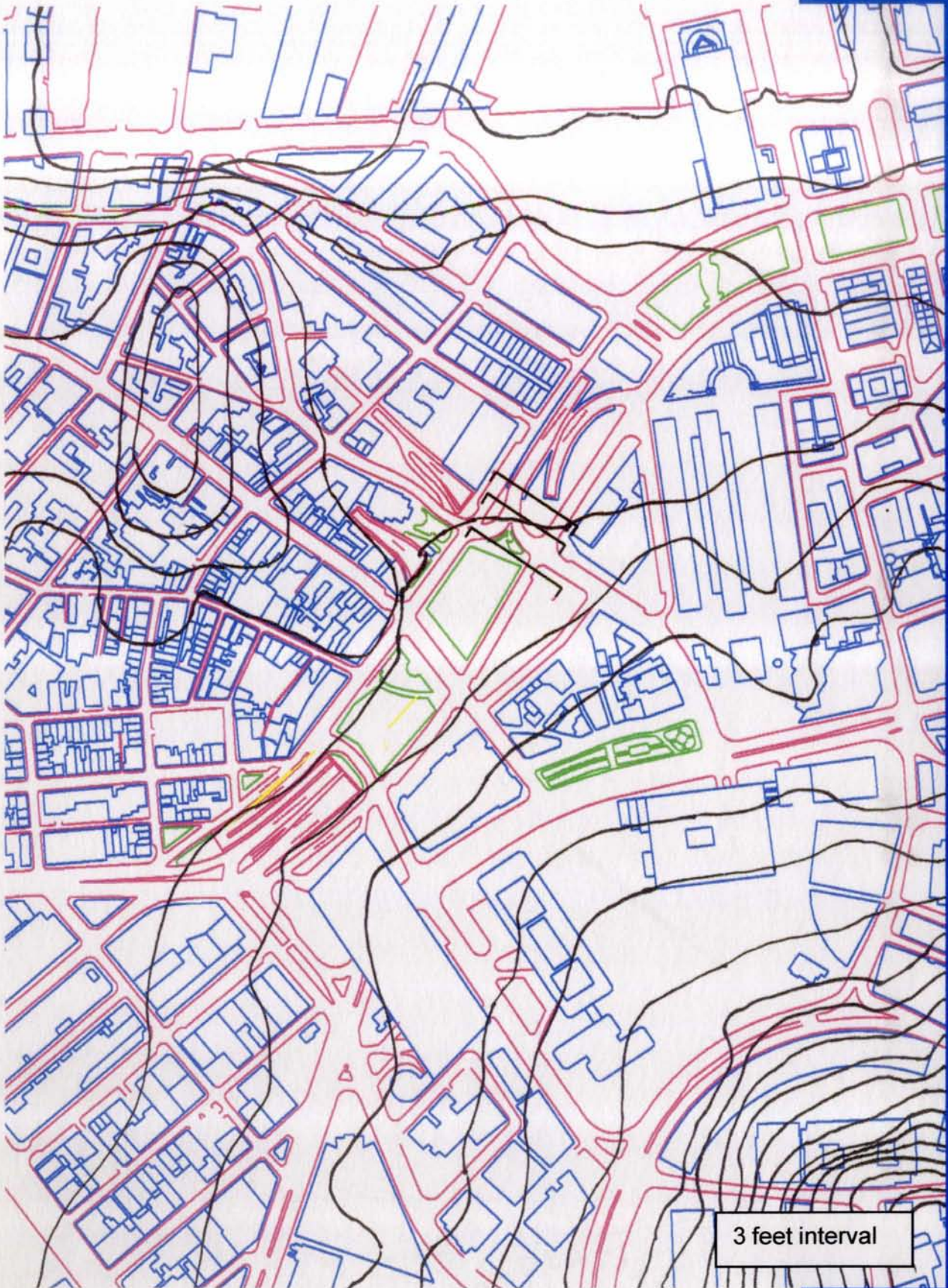
North End

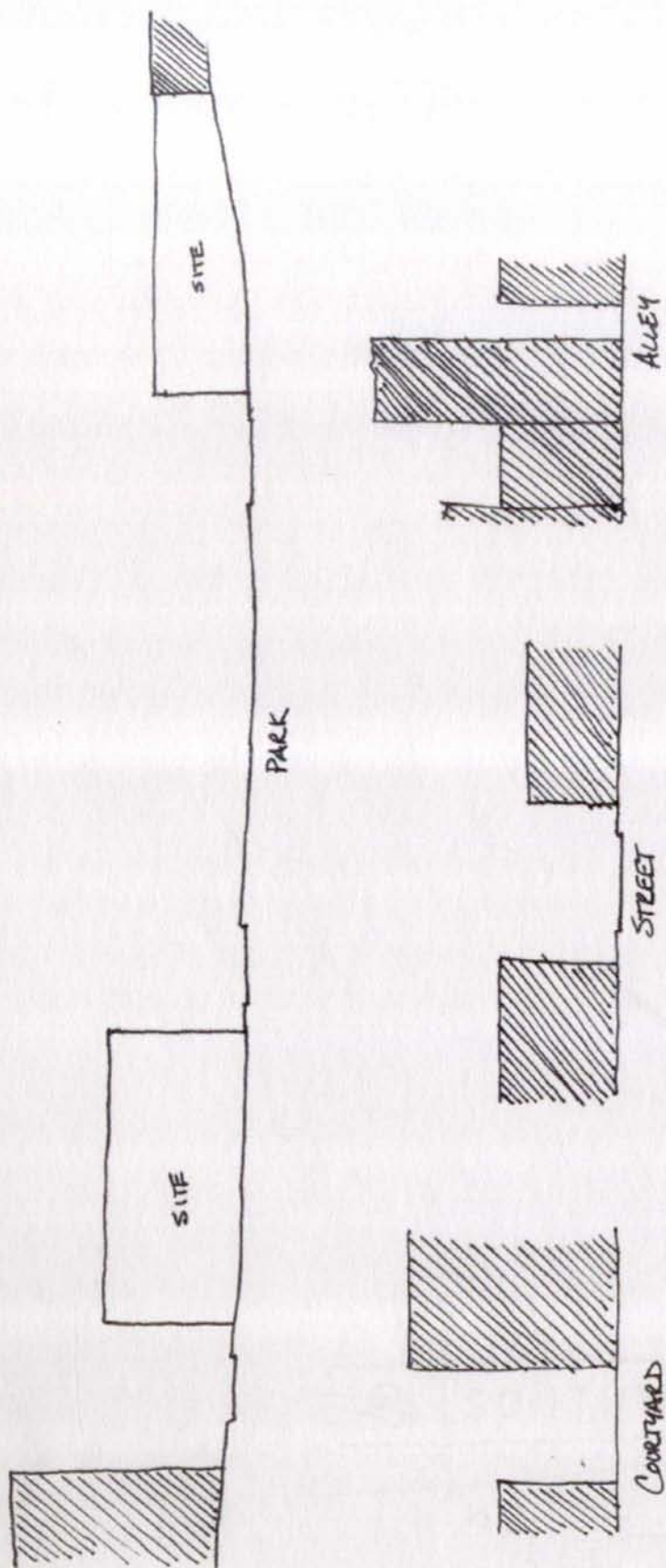


Traffic Flow



Significant Views

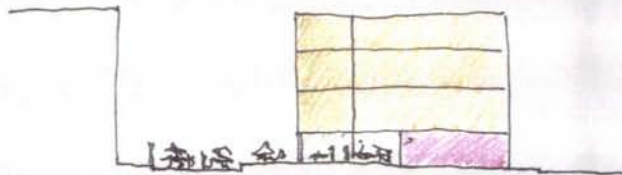
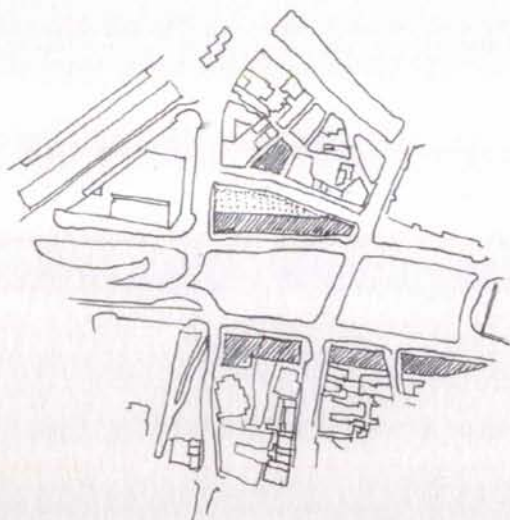




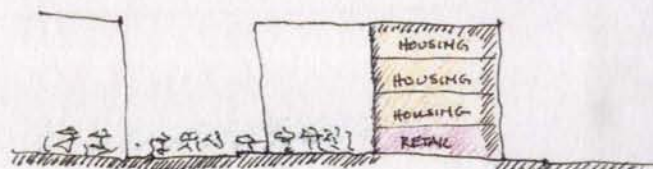
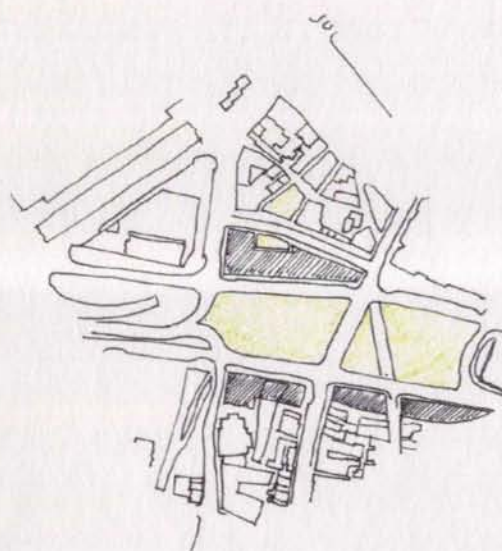




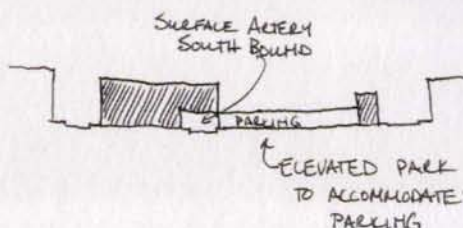
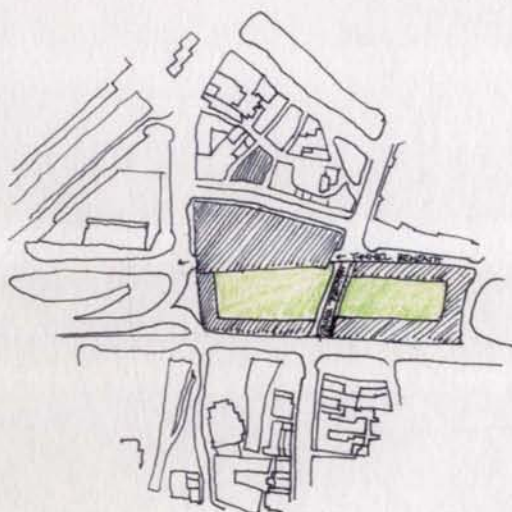
Parti Studies



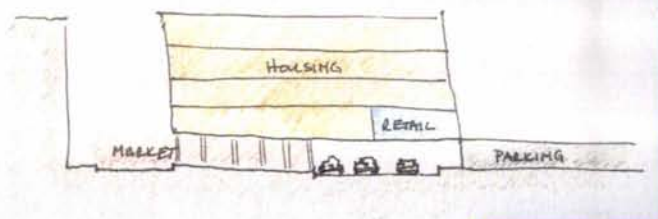
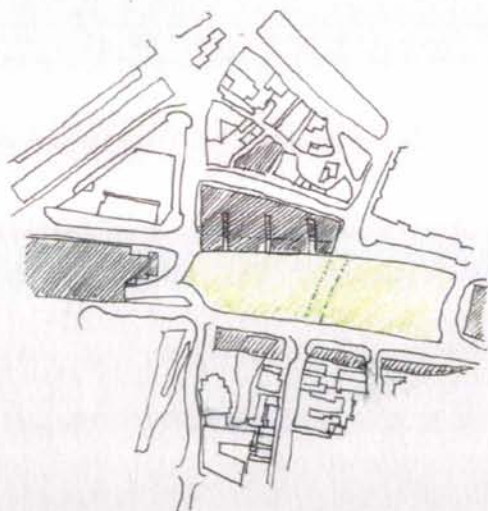
- Define edge of park
- Covered market space
- Housing above retail
- Defined Street boundary



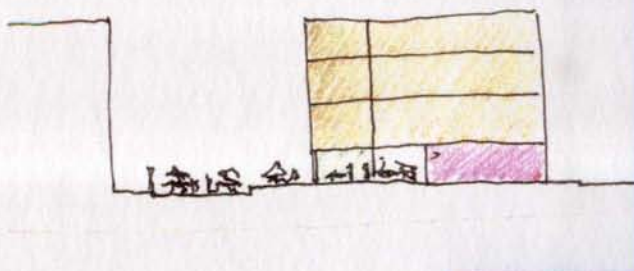
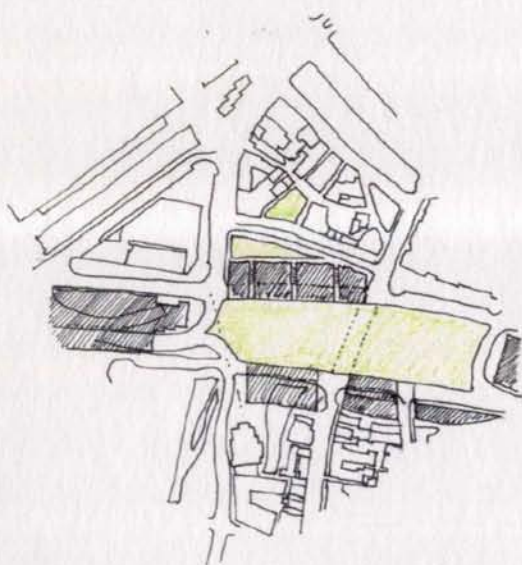
- Overflow of market into green space on both sides of street
- Housing above retail
- Defined edge of park
- No filtration from market to park



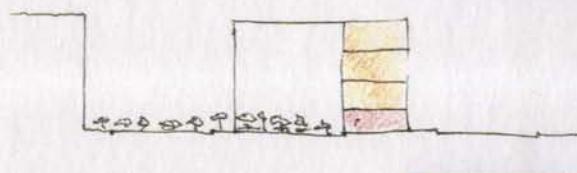
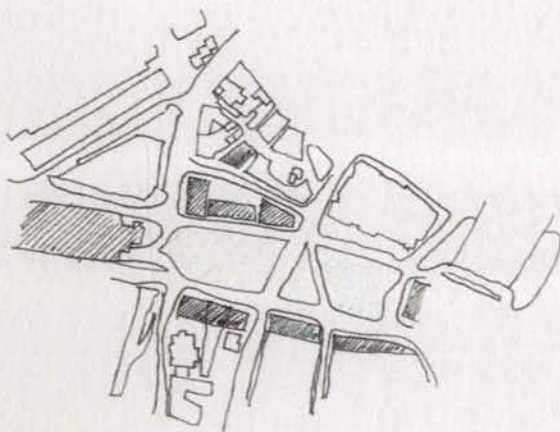
- All park edges defined
- Park elevated to unify park
- Retail space bounds park
- Hanover Street and Surface Artery South below grade



- Filtration permitted at street level
- Retail facing park
- Covered market space provided
- Parking beneath park
- Hanover St. below grade



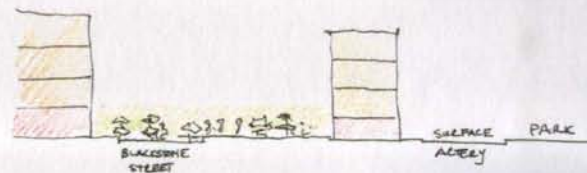
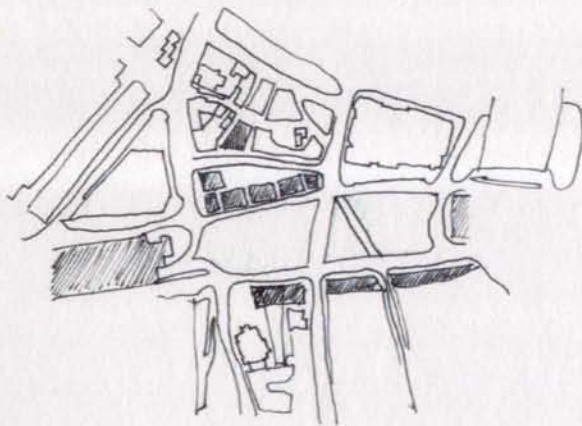
- Covered market space provided
- Vertical circulation from park to market provided
- Hanover St. below grade
- Accepted proposals for buildings to the north and south of the site



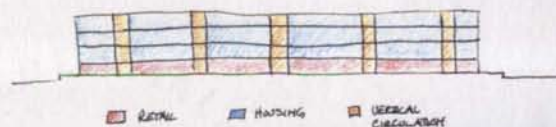
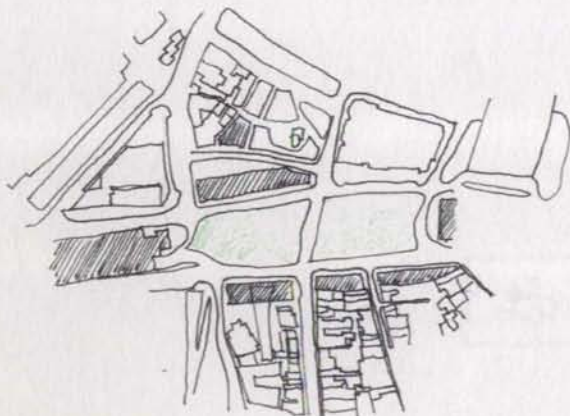
- Improved relation to scale of north end in plan
- Accommodates market
- Defines park boundaries




- Covered market space
- Parking provided
- Masks surface artery
- Facade extended to park



- Intervention at both sides of Blackstone Street
- Defines market space
- Hard edge on park side of parcel
- Refaces east side



- New faces on all sides of park
- Infill on blackstone block
- Park maintains grade



Precedent Analysis

VI. Precedent Analysis

A. Programmatic

Above street level, individual units will be organized to create a continuous facade providing boundary to the park. Rowhouses for Ichinomiya by Kenzo Tange provide an example of organization of units to provide a continuous band of housing. The organization of units around cores of vertical circulation demonstrates the use of a singular core to support four units. This is not possible on the parcel selected for intervention due to the limited depth of the site and increased size of the unit.

Spangden Quarter by Michiel Brinkman in Rotterdam, designed and constructed around 1920 is another example of a successful housing project. The permeability of the facade of Brinkman's design demonstrates a method for allowing visitors to access the park from the market and the market from the park without being forced to walk around the building. The exterior elevated pedestrian circulation may be reinterpreted to provide exterior garden or patio space suspended from the facade of the building. The housing plan by Brinkman exists at the perimeter of the site defining the parcel and the adjoining streets, but is also subdivided into smaller interior courtyards through the creation of wings stemming from the main facades. A pattern of walkways within the courtyard provide access to some units located within the courtyard, while most units are accessible directly from the adjoining streets. It is necessary to acknowledge the size of the site, which will not permit the development of large scale courtyards. The site will, however, support a street pattern similar to that of Blackstone Block which may evolve into small yards at various points.

Market Space will not be a constructed market as is West Side Market in Cleveland, or Quincy Market in

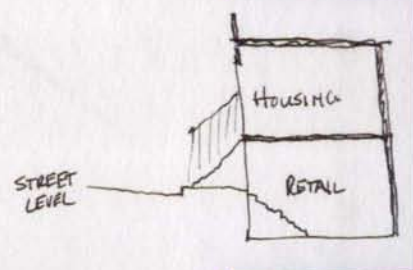
Boston. It will take form as an open space to accommodate the vendors when the market takes place. The current market fills the street with vendor carts and pickup trucks selling fruits and vegetables and various other goods. It is similar to that of the San Lorenzo Market in Florence, Italy. It will be necessary to maintain pedestrian access to and from all housing units that may exist at street level during market conditions. The San Lorenzo market occurs within the perimeter of the street allowing for locals to use the sidewalks to the rear of the vendors. Shop owners on the street also open their doors and participate as an extension of the market. The market is an attraction for locals and tourists needing to accommodate a large influx of population.

The development of retail space on the site will stem from existing conditions within Boston. It is typical of retail space to exist solely at street level with housing above to provide accessibility to the pedestrian passing by. In many areas of Boston, including the North End, it is common for retail space to exist only one half story above ground and penetrate the ground plane to achieve the necessary height, however, the location of tunnels beneath the site may prevent this. The retail space is a manner of mediating between the housing and the ground planes and provides the opportunity for the facade to illustrate a change in program and a base.

B. Non-Programmatic

Planned communities resulting from the New Urbanist Movement provide a foundation for organizational strategies to be applied to the relationship of public spaces to the individual housing units. Two such communities are Seaside, Florida and Kentlands, Maryland, both designed by Andres Duany and Elizabeth Plater-Zyberk in the 1980's are considered to be ideal examples of planned communities.

The central idea for Seaside was to design an



Section through
retail space of
North End

town that fostered “a strong sense of community” (Katz 3). To achieve a sense of community planners approached the design process atypically. They began by determining the location of public spaces, including, squares, streets, parks, and walks. The placement of buildings occurred later allowing the planners to maximize the performance of the buildings in term of the definition they provided for public spaces. Another organizing principle of Seaside is the “five minute walk” guideline which states that by having all necessities of the residents within a five minute walk we eliminate the dependence on the automobile and encourage encounters among residents. The town located on the coast is Walton County contrasts the typical perception of a planned community through its diversity of building types, styles and uses.

Kentlands is similar to Seaside, however it is subdivided into six neighborhoods. Each of the neighborhoods supports residential, office, civic, cultural and retail space. Kentlands maintains some diversity in its population through the use of different housing types. Some types accommodate retired senior citizens, others young professionals and others families. The units are also designed to comply with various incomes diversifying the population.

Each precedent selected for analysis will provide knowledge of a particular element of the overall program. The challenge exists in mediating between the various elements. The study of organization of these projects will assist in this task through providing knowledge of the functionality of each element as a sole programmatic piece.

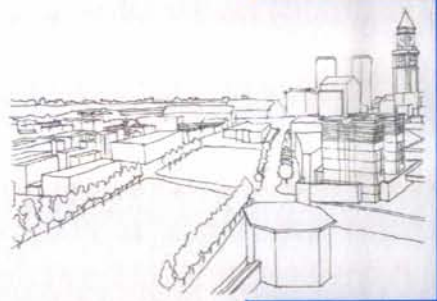
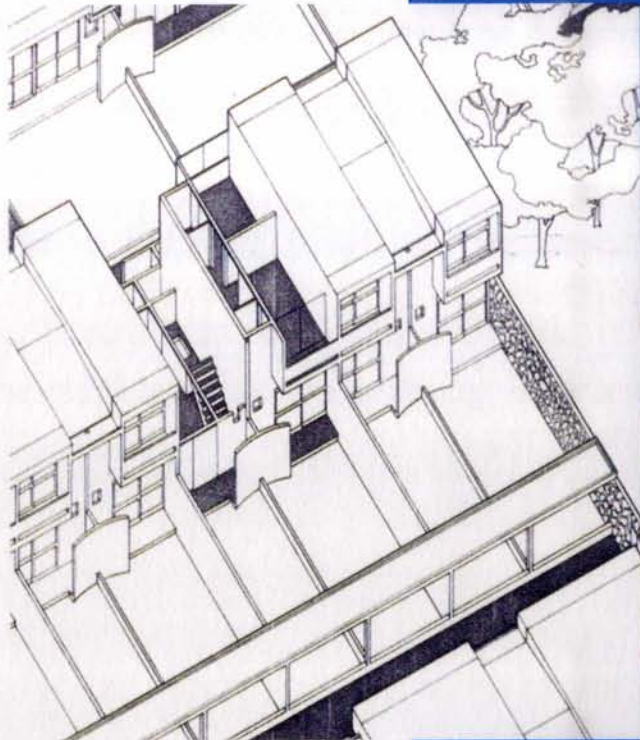
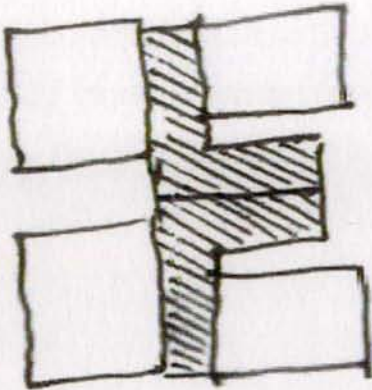


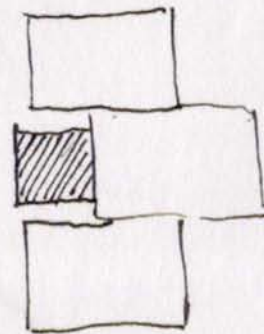
Diagram of the urban room

Rowhouses Ichinomiya Kenzo Tange and Urtec 1961

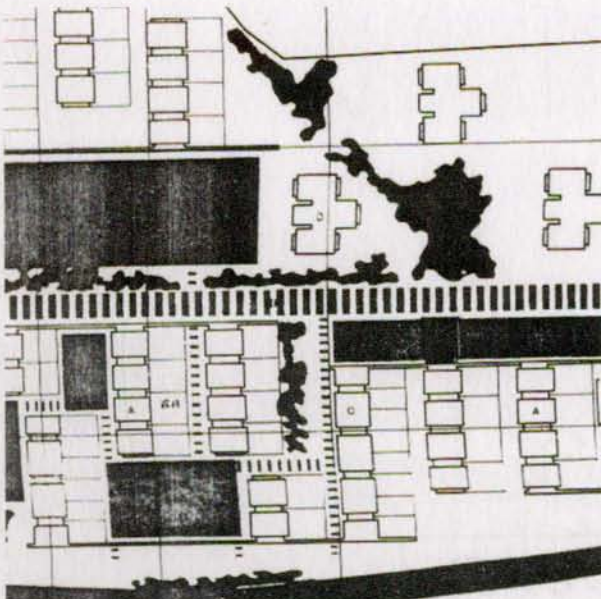


"Modern Housing Prototypes"

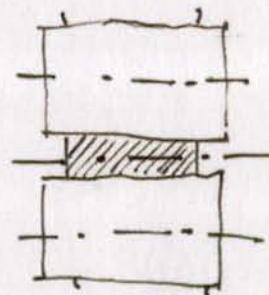
"Built on a module of about 11 feet, the one story units use two bays - about 23 feet - and the two story units only one bay. Both are of comparable size, about 400 square feet, with four rooms each." (Sherwood 59)



VERTICAL CIRCULATION

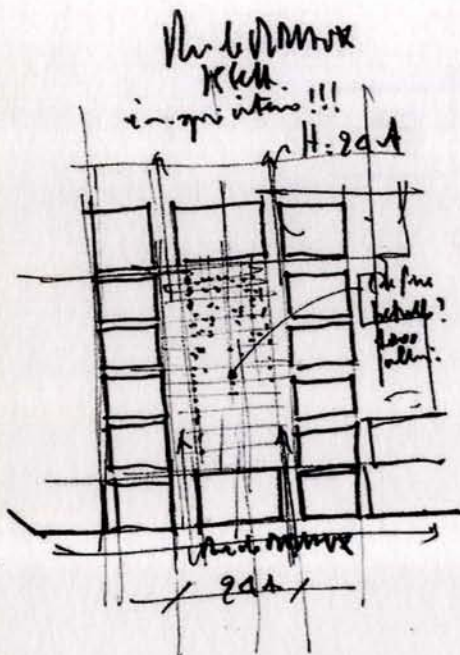


"Modern Housing Prototypes"



VERTICAL CIRCULATION

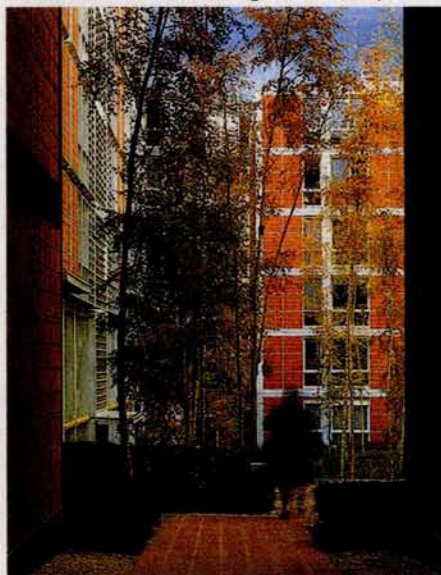
**Rue de Meaux
Paris, France
Renzo Piano
1987-1991**



Renzo Piano Building Workshop

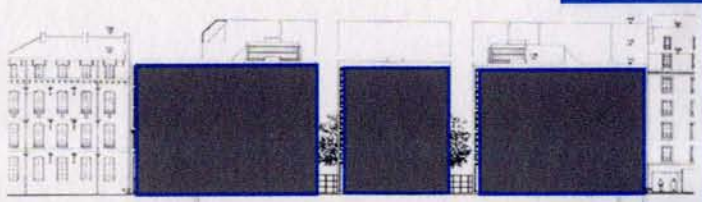
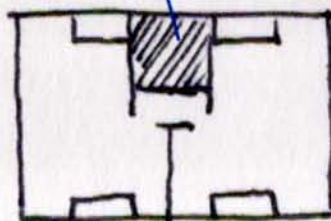
"The combination of extremely modern materials and traditional ones used in an innovative fashion (terra-cotta) is a frequent feature of my work, as is the presence of nature, a vital element of decoration in the urban fabric, in deliberate tension with the surrounding constructions" - Renzo Piano

Renzo Piano Building Workshop



Renzo Piano Building Workshop

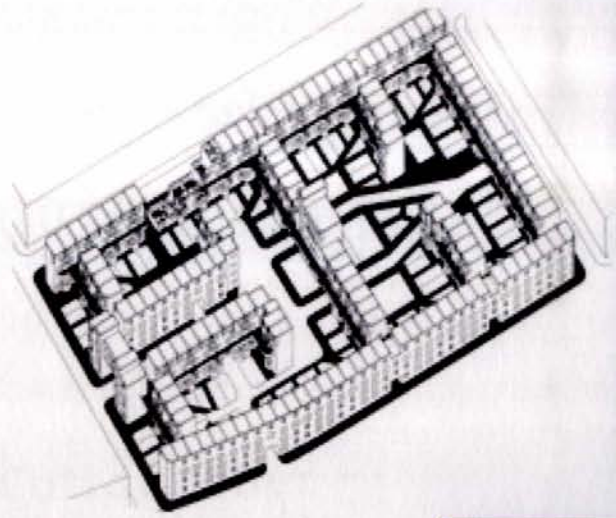
Vertical Circulation



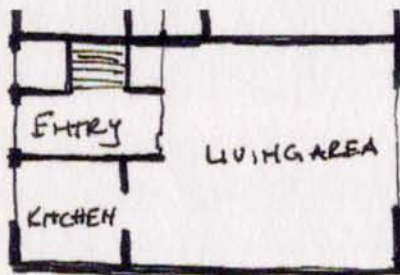
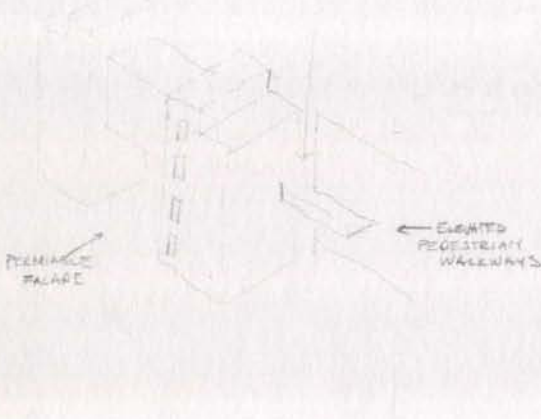
- Permeability of Facade to permit entry to courtyard translates to entry to market from park through permeable facade

Spangden Quarter Housing
Rotterdam, Netherlands
Michiel Brinkman
1919-1921

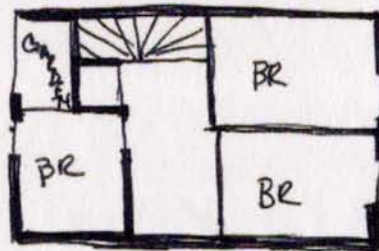
Housing



"Modern Housing Prototypes"



FIRST FLOOR



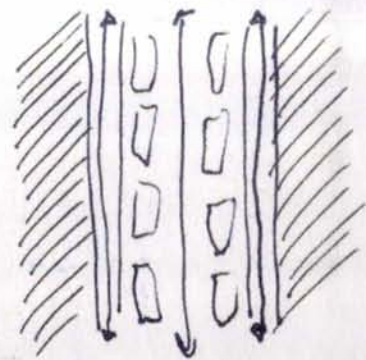
SECOND FLOOR

Brinkman's plan for Spangden quarters is not directly applicable to the site due to the limited size of the site and the required dimensions of the unit. It is the organizational principles, as well as, the relationship of the structures to public space that is applicable.



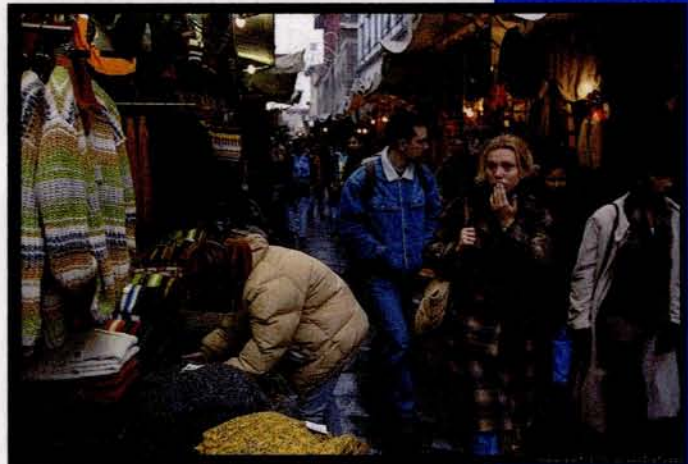
"Modern Housing Prototypes"

San Lorenzo Market Florence, Italy

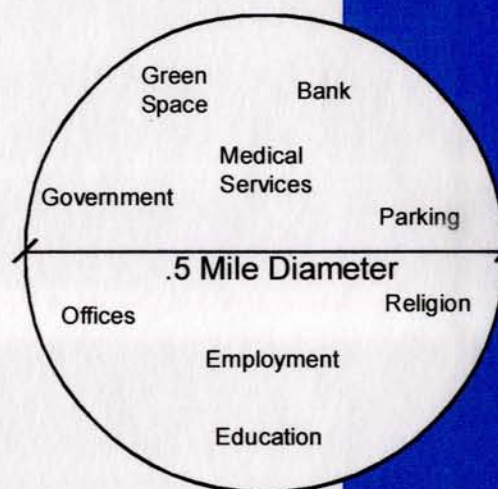
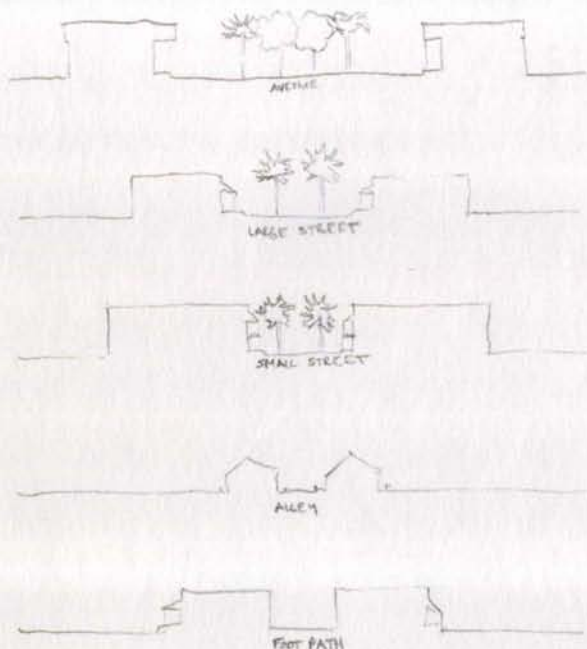


PLAN OF MARKET

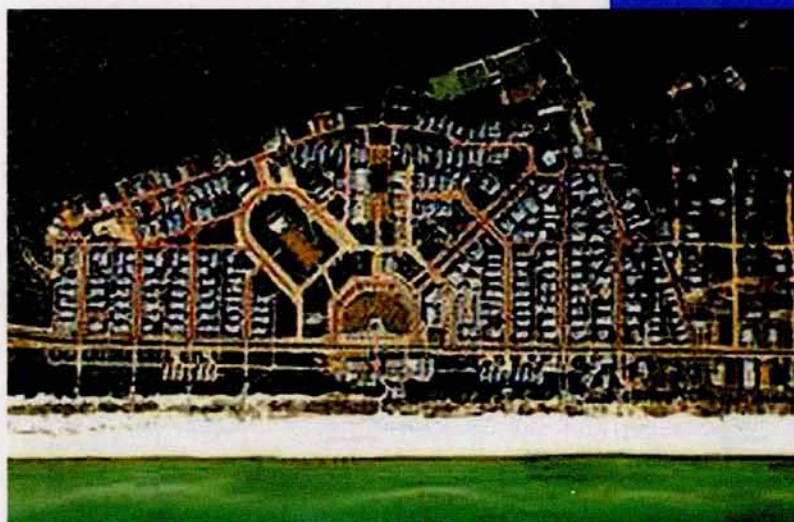
The market at San Lorenzo is an outdoor market similar to the Haymarket on Blackstone Street. Like San Lorenzo the Haymarket will occur in the street and on a portion of parcel nine. It is necessary that the market continue to allow pedestrian access to adjacent buildings, while accommodating consumers in a central path of circulation.



Seaside, Florida Andres Duany Elizabeth Plater-Zyberk



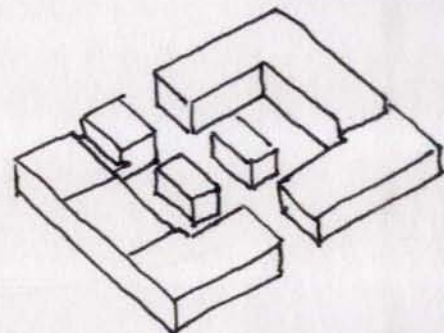
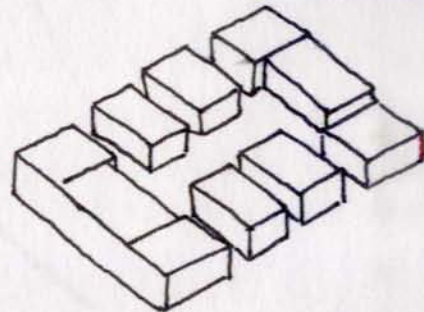
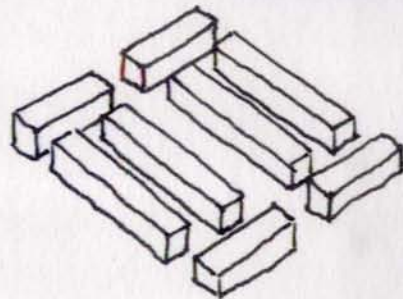
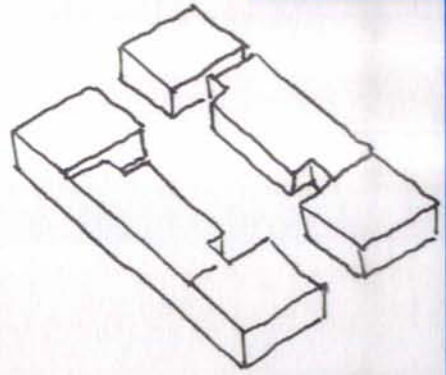
“The built environment must be diverse in use and population; must be scaled for the pedestrian, yet capable of accommodating the auto and mass transit and must have a well-defined public realm supported by an architecture reflecting the ecology and culture of the region. These principles—diversity, human scale and a formative public realm—apply equally to physical design, economic policy and social form.”
(www.theseasideinstitute.org)



**Communications Hill
San Jose, California
Daniel Soloman
Kathryn Clarke
1991**



Various organizational strategies, all defining a centralized public space, are used to organize individual blocks within the context of the community.



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